

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460



OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES  
Antimicrobials Division

November 14, 2002

**SUBJECT: PRODUCT CHEMISTRY REVIEW OF:**  
**Vanquish 100 Antimicrobial**

**DP Barcode: None**  
**Manufacturing-use [ ] OR**

**Reg. No. Or File Symbol: 72674-E**  
**End-use Product [X]**

**TO:** Marshall Swindell/Martha Terry  
PM Team No. 33

**FROM:** Nancy Whyte, Chemist *Naw*  
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**Product Formulation**

**Active Ingredient(s)**  
N-Butyl-1,2-benzisothiazolin-3-one

**% by wt.**  
97.8%

**BACKGROUND:**

This is an addendum to a product chemistry review originally written in June 1998. The company has changed its name and the name of the product since the previous review. This chemical is a Technical Grade Active Ingredient (TGAI) used to control growth of bacteria and fungi when used in the manufacture of plastics or their precursors. In the previous review, no mention had been made of three physical characteristics data required for registration of liquid products. That data, solubility in water (830.7840), boiling point (830.7220), and dissociation constants in water (830.7370),

were apparently not submitted with the rest of the 830 Series Guidelines, Part B. The boiling point and solubility might be useful to manufacturers in production of plasticizers, and the producer of the TGAI should submit that data to the Agency to be added to the other data previously reviewed and approved. A summary of the previous 830 Guidelines data, annotated with the currently acceptable product chemistry guideline numbers is attached below.



**PRODUCT CHEMISTRY (Series 830 Part A)**

	Acceptance of Information	MRID No.
830.1550 Chemical ID (See Appendix) <sup>1</sup>	A	443649-02
830.1600 Description of Materials	A	443649-02
830.1620 Manufacturing Process <sup>2</sup>	A	443649-03,-04,-06
830.1650 Formulation Method <sup>3</sup>	A	443649-02
830.1670 Discussion of Impurities <sup>4</sup>	A	443649-02, -05
830.1700 Analysis <sup>5</sup>	A	443649-01
830.1750 Certified Limits <sup>6</sup>	A	4443649-01
830.1800 Analytical Method for AIs <sup>7</sup>	A NMR, IF, UV, HPLC	443649-02

Explanation: A=acceptable; N=not acceptable; NA=technically not applicable; NR= not required, G=data gap; U=requires upgrading; W=waived; E=EPA estimate.

<sup>1</sup>See Confidential Appendix A for additional information

<sup>2</sup>For MP/EP products produced by an integrated formulation system.

<sup>3</sup>For products from a TGAI or MP

<sup>4</sup>May be waived unless actual/possible impurities are of toxicological concern.

<sup>5</sup>Five batch analysis required for products produced by an integrated formulation system.

<sup>6</sup>If different from standard CLS recommended in 40 CFR 158.175, this should be discussed in Confidential Appendix A.

<sup>7</sup>Abbreviate method used as follows: gas chromatography (GC), infrared (IR),

**Physical and Chemical Characteristics (Series 830, Part B)**

6b. <u>Physical/Chemical Properties*</u>	Acceptance of data	Value or qualitative description	MRID No.
830.6302 Color	A	Brown	444108-01
830.6303 Physical State	A	Viscous liquid	444108-02
830.6314 Oxidation/Reduction	A	Non-oxidizer	"
830.6315 Flammability/Flash Pt	A	Flash pt 178 +/- 5° C	443649-01
830.6316 Explodability	A	Not explosive	443649-01
830.6317 Storage Stability	A	Pending completion of one year study	443649-01 :
830.6320 Corrosion Character.	A	Pending	"
830.7000 pH	A	2.77 at 23.9° C	443649-02
830.7100 Viscosity	A	75.2 mPs at 25° C	443649-02
830.7220 Boiling pt/ range	G		
830.7300 Relative density	A	1.17 at 20° C	443649-02
830.7330 Dissociation constants	G		

Explanation: A=acceptable; N=not acceptable; NA=technically not applicable; NR= Not required  
G=data gap; U=requires upgrading; W=waived; E=EPA estimate.

\* Provide brief description, e.g., color--yellow or property value, e.g., density 1.25 g/cc;  
Unless otherwise indicated, the property should be at 25° C.